Inventors: Lee et al. Serial No. 10/773,032

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Renlacement Sheet



Interleukin-8 receptor A: SeqID: ENSP0000295683 Sequence and pentamer URS distribution

MSNITDPQMWDFDDLNFTGMPPADEDYSPCMLETETLNKYVVIIAYALVFLLSLLGNSLVMLVILYSR

VGRSVTDVYLLNLALADLLFALTLPIWAASKVNGWIFGTFLCKVVSLLKEVNFYSGILLLACISVDRY

LAIVHATRTLTQKRHLVKFVCLGCWGLSMNLSLPFFLFRQAYHPNNSSPVCYEVLGNDTAKWRMVLRI

LPHTFGFIVPLFVMLFCYGFTLRTLFKAHMGQKHRAMRV1FAVVL1FLLCWLPYNLVLLADTLMRTQV

IQESCERRNNIGRALDATEILGFLHSCLNPIIYAFIGQNFRHGFLKILAMHGLVSKEFLARHRVTSYT

SSSVNVSSNL (SEO ID NO. 546)

NO. 567) PYNLV (SEQ ID NO. 568) QKHRA (SEQ ID NO. 569) QMWDP (SEQ ID NO. 570) QNFRH (SEQ ID NO. 571) TAKWR (SEQ ID NO. 572) TDPQM (SEQ ENSP00000295683: list of pentamer URS peptides: (total number: 35) AHMGQ (SEQ ID NO. 547) AKWRM (SEQ ID NO. 548) AYHPN (SEQ ID NO. 549) CERRN SEG1) KYVVI (SEG ID NO. 562) MGQKH (SEQ ID NO. 563) MPPAD (SEQ ID NO. 564) NFTGM (SEQ ID NO. 565) NGWIF (SEQ ID NO. 566) PQMWD (SEQ ID FCYGF (SEQ ID NO. 556) FKAHM (SEQ ID NO. 557) GQNFR (SEQ ID NO. 558) HTFGF (SEQ ID NO. 559) IWAAS (SEQ ID NO. 560) KWRMV (SEQ ID NO. ID NO. 573) VCLGC (SEQ ID NO. 574) VCYEV (SEQ ID NO. 575) VMLFC (SEQ ID NO. 576) VNGWI (SEQ ID NO. 577) WDFDD (SEQ ID NO. 578) WIFGT (SEQ ID NO. 550) CLGCW (SEQ ID NO. 551) CYGFT (SEQ ID NO. 552) DLNFT (SEQ ID NO. 553) DPQMW (SEQ ID NO. 554) DTAKW (SEQ ID NO. 555) (SEQ ID NO. 579) WRMVL (SEQ ID NO. 580) YSPCM (SEQ ID NO. 581)

: URS Penta-peptide

Figure 1

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LYIVSLSVADLIVGAVVMPMNILYLLMSK!WSLGR!PLCLFWLSMDYVASTASIFSVFILCIDR!YR! SVQQPLR!YLK!YR!TK!TR!ASATILGAWFLSFLWVIPILGWNHFMQQTSVR!R!EDK!CETDFYDV

MSLPNSSCLLEDK!MCEGNK!TTMASPQLMPLVVVLSTICLVTVGLNLLVLYAVR!SER!K!LHTVGN

Histamine H1 receptor: SeqID: ENSP0000273023

Sequence and pentamer URS distribution

TWFK!VMTAIINFYLPTLLMLWFYAK!IYK!AVR!QHCQHR!ELINR!SLPSFSEIK!LR!PENPK!G

DAK!K!PGK!ESPWEVLK!R!K!PK!DAGGGSVLK!SPSQTPK!EMK!SPVVFSQEDDR!EVDK!LYC

FPLDIVHMQAAAEGSSR!DYVAVNR!SHGQLK!TDEQGLNTHGASEISEDQMLGDSQSFSR!TDSDTT

ETAPGK!GK!LR!SGSNTGLDYIK!FTWK!R!LR!SHSR!QYVSGLHMNR!ER!K!AAK!QLGFIMA

AFILCWIPYFIFFMVIAFCK!NCCNEHLHMFTIWLGYINSTLNPLIYPLCNENFK!K!TFK!R!ILHI

(SEO ID NO. 582) ス い い

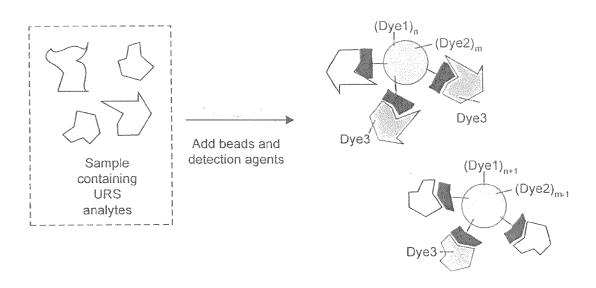
DOMLG (SEO ID NO. 588) FILCT (SEO ID NO. 589) FLWVI (SEO ID NO. 590) FMQQT (SEO ID NO. 591) FWLSM (SEO ID NO. 592) GWNHF (SEO ID NO. NO. 599) LWFYA (SEO ID NO. 600) MCEGN (SEO ID NO. 601) MDYVA (SEO ID NO. 602) MFTIW (SEO ID NO. 603) MLWFY (SEO ID NO. 604) NCCNE 593) HLHMF (SEQ ID NO. 594) HMFTI (SEQ ID NO. 595) HTVGN (SEQ ID NO. 596) IFFMV (SEQ ID NO. 597) ILCWI (SEQ ID NO. 598) LLMSK (SEQ ID SEQ ID NO. 605] NHFMQ (SEQ ID NO. 606) PLCLF (SEQ ID NO. 607) SPWEV (SEQ ID NO. 608) VIAFC (SEQ ID NO. 609) WFYAK (SEQ ID NO. 610) URS Penta-peptide: AIINF (SEQ ID NO, 583) CEGNK (SEQ ID NO, 584) CNENF (SEQ ID NO, 585) CWIPY (SEQ ID NO, 586) DFYDV (SEQ ID NO, 587) WNHFM (SEQ ID NO. 611) WVIPI (SEQ ID NO. 612) YCFPL (SEQ ID NO. 613)

: URS Penta-peptide !: trypsin cutting site,

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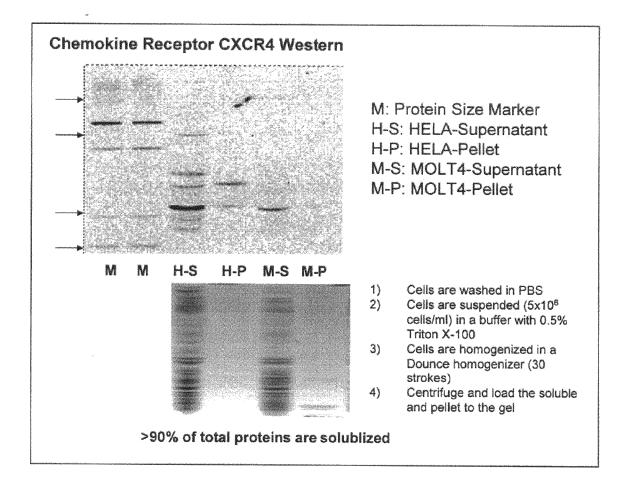
Figure 3



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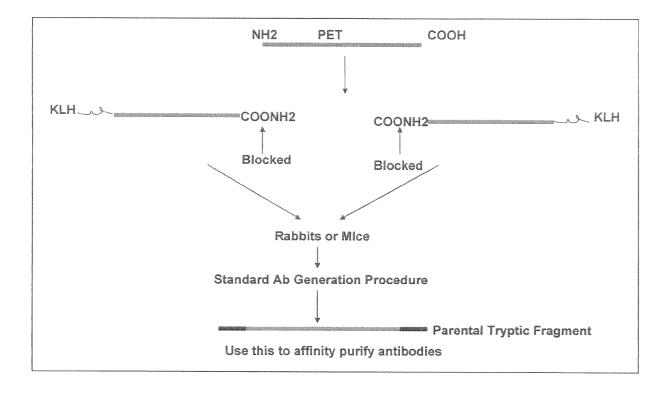
Figure 4



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Figure 5

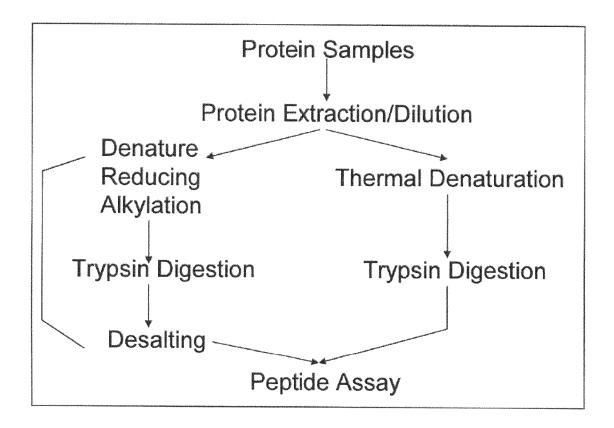


Thereof in Protein Modification Analysis

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Figure 6

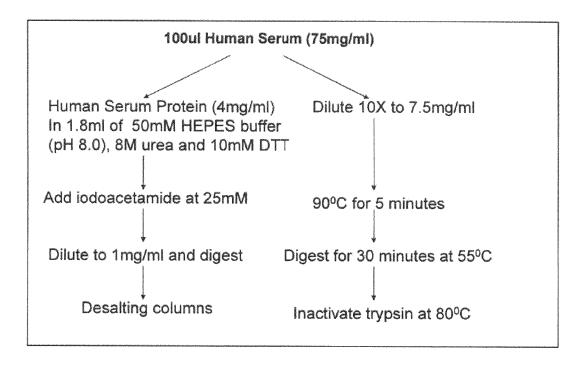


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Figure 7

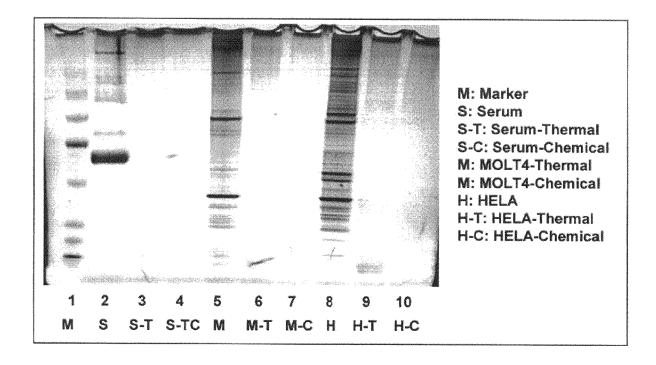


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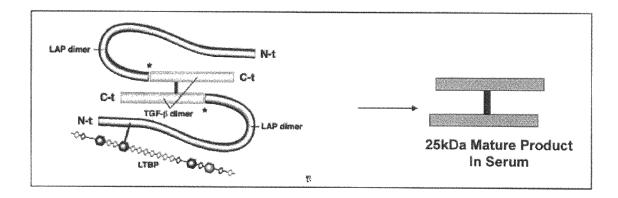
Figure 8



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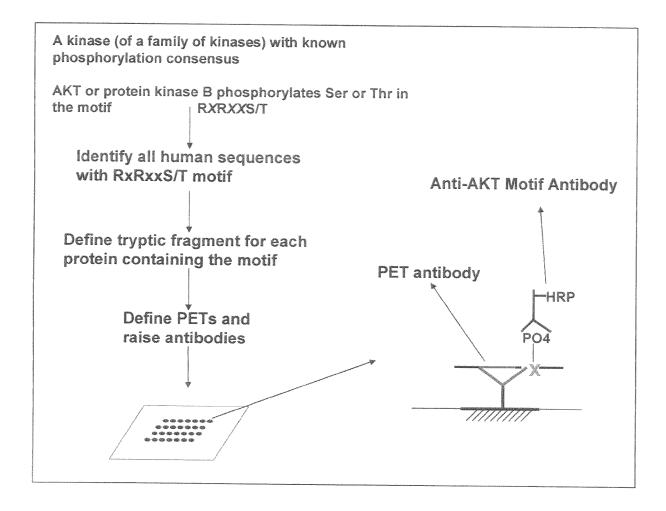
Figure 9



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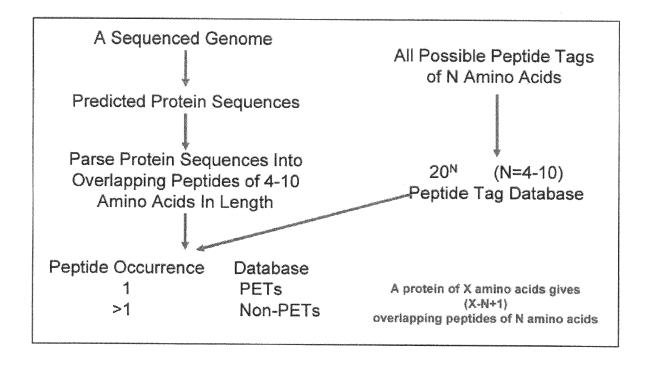
Figure 10



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Figure 11



Title: Proteome Epitope Tags and Methods of Use Thereof in Protein Modification Analysis Inventors: Lee et al. Serial No. 10/773,032 Express Mail Label EM 046052199 US Replacement Sheet

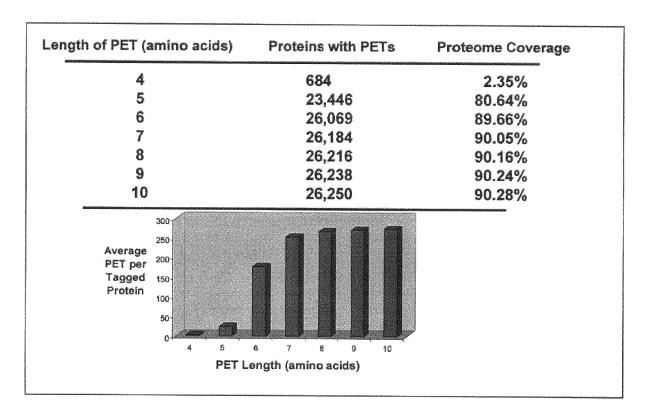
Figure 12

Tag Length (amino acids)	All Possible Tags	Total PETs	Total Non-PETs (non-redundant)
4 5 6 7 8 9	160,000 3.2x10 ⁶ 6.4x10 ⁷ 1.28x10 ⁹ 2.56x10 ¹⁰ 5.12x10 ¹¹	745 560,309 4,609,172 6,652,224 7,018,340 7,138,933	158,862 1,684,684 2,350,532 1,848,908 1,744,029 1,714,971
10 29,076 human prot ~12M overlapping	1.02x10 ¹³ rein sequences analyzed 4-10mr peptides	7,216,090 In Total Tag Space in	1,695,512

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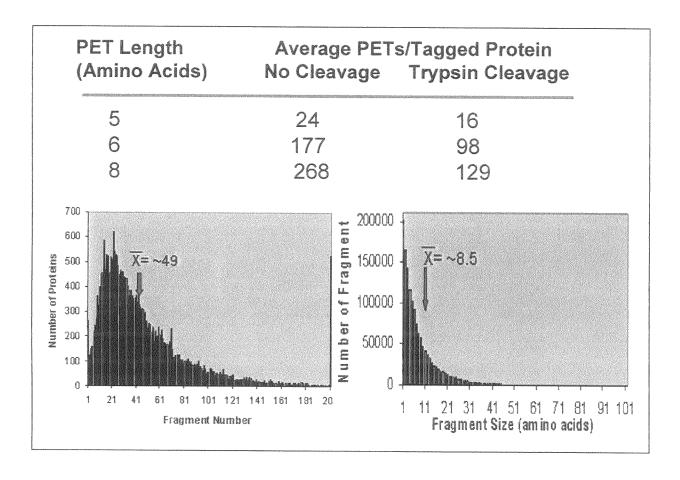
Figure 13



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Figure 14

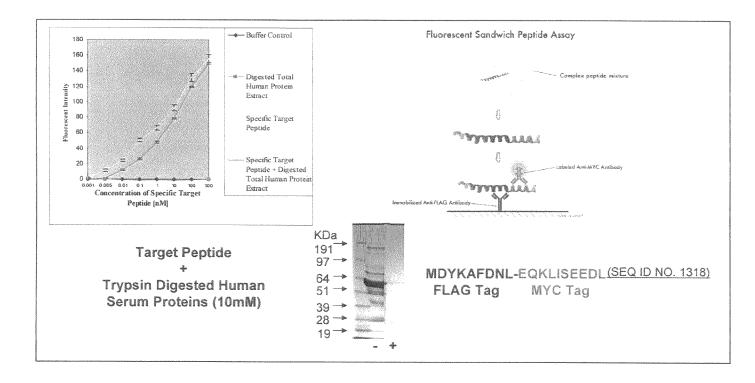


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Figure 15

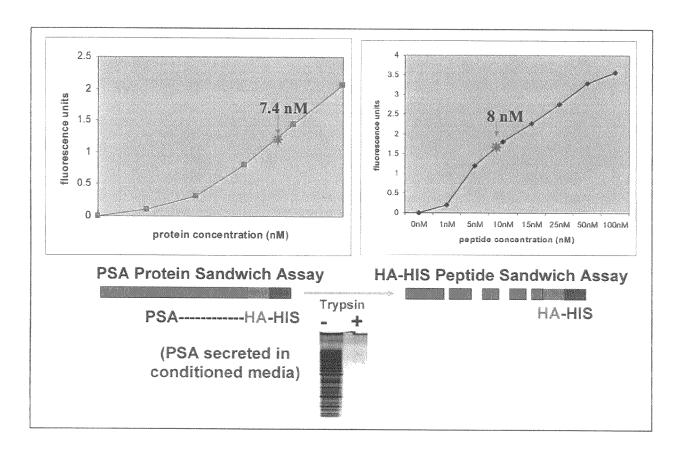


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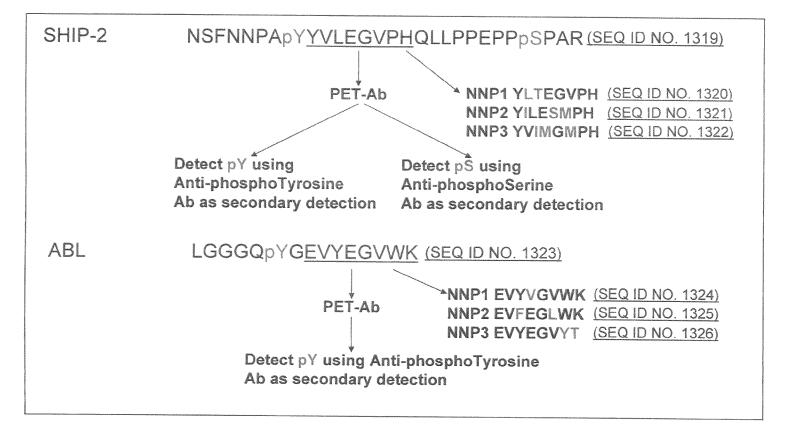
Figure 16



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Figure 17

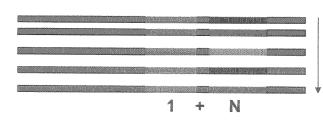


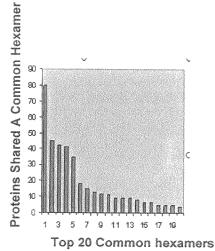
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Figure 18





Size of the Tag **Number To Represent** All Kinases

5 aa 88 6 aa 122

Top 20 common hexamers are shared by 72% of 520 kinases

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Figure 19

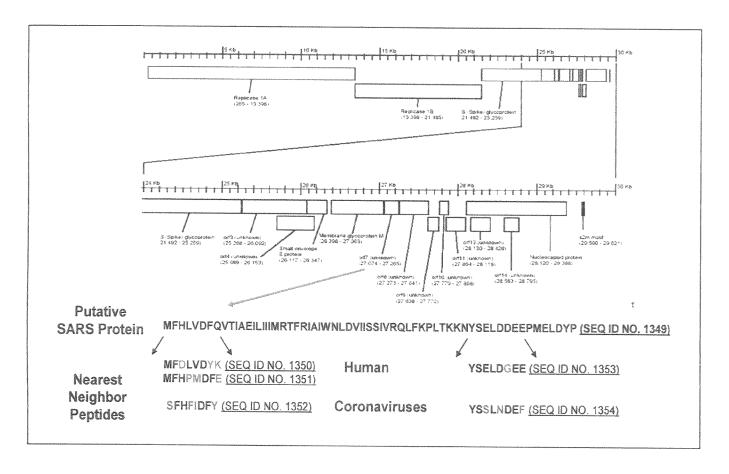
Protein	Parental Tryptic Peptide	Also Detect
BRAF	WSGSHQFEQLSGSILWMAPEVIR* (SEQ ID NO. 1327)	
DLK	MSFAGTVAWMAPEVIR (SEQ ID NO. 1328)	
GCK	SFIGTPYWMAPEVAAVER (SEQ ID NO. 1329)	
HH498	WMAPEVFTQCTR (SEQ ID NO. 1330)	
HPK1	LSFIGTPYWMAPEVAAVALK (SEQ ID NO. 1331)	
LOK	DSFIGTPYWMAPEVVMCETMK (SEQ ID NO. 1332)	KSH1,2,HPK1, SLK
LZK	MSFAGTVAWMAPEVIR (SEQ ID NO. 1333)	
MAP3K	SMHGTPYWMAPEVINESGYGR (SEQ ID NO. 1334)	
MST1	NTVIGTPFWMAPEVIQEIGYNCVR (SEQ ID NO. 1335)	MST2
MST4	NTFVGTPFWMAPEVIQQSAYDSK (SEQ ID NO. 1336)	
MY03A	NTSVGTPFWMAPEVIACEQQLDTTYDAR (SEQ ID NO. 1337)	MY03B
MYO3B	NTSVGTPFWMAPEVIACEQQYDSSYDAR (SEQ ID NO. 1338)	MY03A
ZC1/HGK	NTFIGTPYWMAPEVIACDENPDATYDYR (SEQ ID NO. 1339)	ZC2,ZC3
OSR1	TFVGTPCWMAPEVMEQVR (SEQ ID NO. 1340)	
PAK1	STMVGTPYWMAPEVVTR (SEQ ID NO. 1341)	PAK2,3
PAK5	SLVGTPYWMAPEVISR (SEQID NO. 1342)	PAK6
RAF1	WSGSQQVEQPTGSVLWMAPEVIR (SEQ ID NO. 1343)	
STLK3	TFVGTPCWMAPEVMEQVR (SEQ ID NO. 1344)	
TAO1	ASMASPANSFVGTPYWMAPEVILAMDEGQYDGK (SEQ ID NO. 1345)	TAO3
TAO2	ASIMAPANSFVGTPYWMAPEVILAMDEGQYDGK (SEQ ID NO. 1346)	
TESKI	EPLAVVGSPYWMAPEVLR (SEQ ID NO. 1347)	
ZAK	TTHMSLVGTFPWMAPEVIQSLR (SEQ ID NO. 1348)	
E	BLUE = PET	

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Figure 20

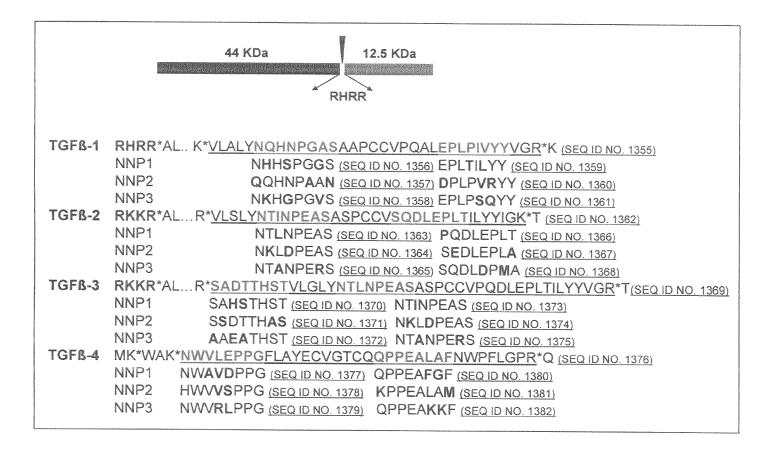


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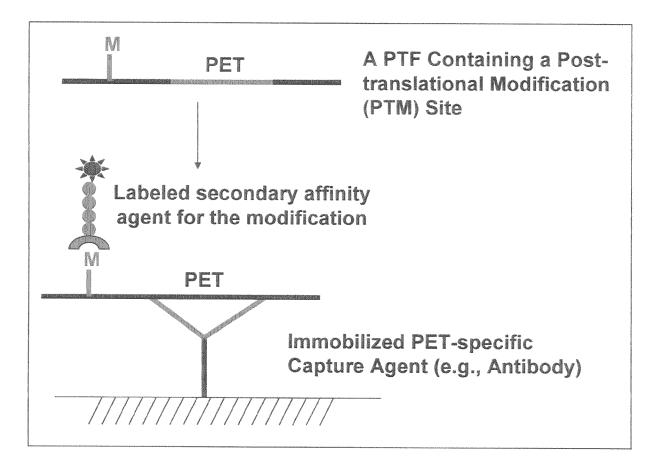
Figure 21



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Figure 22

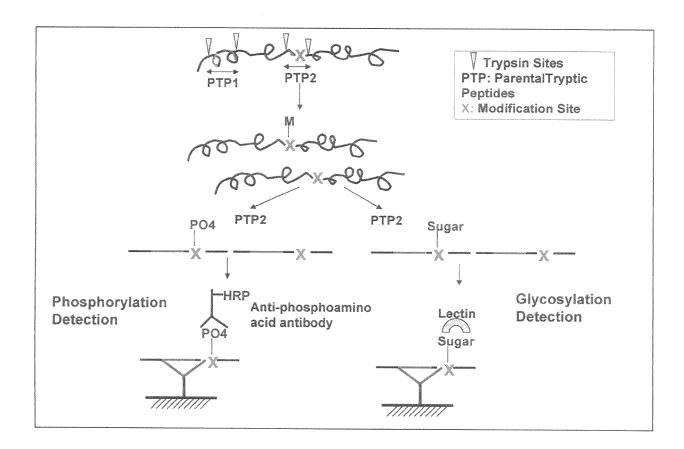


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Figure 23



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Figure 24

